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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/563,377	04/27/2006	Peter Hubert Windmuller	4662-129	4401
23117 7590 05/08/2009 NIXON & VANDERHYE, PC 901 NORTH GLEBE ROAD, 11TH FLOOR ARLINGTON, VA 22203				
EXAMINER				
LU, C CAIXIA				
ART UNIT		PAPER NUMBER		
1796				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary**Application No.**

10/563,377

Applicant(s)

WINDMULLER ET AL.

Examiner

Caixia Lu

Art Unit

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 February 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-4 and 11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-4 and 11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/CDC)
- Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on December 31, 2009 has been entered.
2. It is noted that applicants have requested to elect the catalyst η^5 -(perfluorophenyl)cyclopentadienyl)(tri-*tert*-butylphosphinimine) titanium dimethyl as the elected catalyst complex species for examination in the response filed September 5, 2007. The elected species is found to be novel, the examination is now extended to all of the subgenus of metallocene complexes defined by Formula I wherein "Y" is defined by Formula II. Applicants are reminded that the original elected species of η^5 -(cyclopentadienyl) 1,3-bis(2,6-dimethylphenyl)-iminoimidazoline titanium dimethyl on January 11, 2007 must be cancelled since the claimed process defined by the previous elected species has been finally rejected.
3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 112

4. Claims 2-4 and 11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The formats of the selective groups for "Y", "R¹", "R²", are improper because Markush terminology requires the phrase "selected from the group consisting of" and the connector "and" between the last two members. See MPEP 2173.05 (h).

Appropriate corrections are requested.

Claim Rejections - 35 USC § 103

5. Claims 2-4 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoang et al. (US 6,583,082) in view of Gillis et al. (WO 97/38019) for the same rationale as set forth in the previous Final Office Action mailed May 15, 2008.

Response to Arguments

6. Applicant's arguments filed February 9, 2009 have been fully considered but they are not persuasive.

Applicants again argue that there is no motivation provided in Hoang or Gills to produce Applicants' claimed invention since Gillis specifically teaches against the use of Applicants' claimed catalyst composition. Again, it still is the examiner's position that Applicants' arguments is irrelevant since Gillis' teaching is cited here for its general teaching of preparation of ethylene/ α -olefin/vinyl norbornene terpolymer in the presence of a metallocene catalyst being well established in industry rather than the teaching of the catalyst composition. Therefore, it is obvious to employ any metallocene catalyst

such as Hoang's catalyst to attempt the preparation ethylene/ α -olefin/vinyl norbornene terpolymer in search for a catalyst composition for providing the terpolymer with desired molecular weights and compositions unless there is showing of criticality and unexpected. To overcome the rejection under 35 U.S.C. 103(a), Applicants need to show why it is not obvious to conduct ethylene/ α -olefin/vinyl norbornene polymerization in the presence of Hoang's catalyst composition by providing unexpected results over Hoang's process.

Applicants' arguments regarding Example 4 and Comparative Example C are irrelevant because those arguments fail to address any of the issues raised in the rejections of the previous Office Action. First of all, Comparative Example C does not represent Hoang's metallocene catalyst since Hoang's the cocatalyst of Hoang's metallocene catalyst is an alumoxane rather than the aluminoxane and borate mixture of Comparative Example C and Hoang's metallocene catalysts used in the working examples are different from Applicants' Cat 1 or Cat 2. Secondly, Example 4 and Comparative Example C are not comparable in that the amount VNB used in Example 4 of 41.7 mmol/L is about 11 times more than the amount VNB of 3.8 mmol/L of Comparative Example C, meaningful comparison can not be made. Thirdly, Example 8 and Comparative Example C are not conducted in "similar" conditions as asserted by Applicants since both the cocatalysts and the amounts of VNB used in both examples are different, about 30% more of VNB is used in Comparative Example C compared to that of Example 8, therefore, higher branches are expected in Comparative Example C.

Applicants further argue that the claimed invention was to build a high amount of VNB in the terpolymer for effective curing with peroxide which is different from Gillis--the VNB in the polymer is to increase the level of branching. Since the amount of VNB in the polymer limitation is not in the claims, those arguments are not relevant towards the claimed limitations.

Most importantly, even if there is showing of criticality and unexpected results in applicants' comparisons, the showing is still not commensurate with the scope of the instant claims. While Applicants' exemplified metallocene complex with a polar perfluorophenyl substituent on the cyclopentadienyl ring meets the metallocene complex limitation of the instant claims, it does not represent the whole scope of various metallocene complexes of the instant claims. That is, those "unexpected" results listed in Tables 2 and 3 might only be obtainable with Cat 1 or Cat 2.

In view of the foregoing, the rejections are deemed proper and thus maintained.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Caixia Lu whose telephone number is (571) 272-1106. The examiner can normally be reached on 9:00 a.m. to 5:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Caixia Lu/
Primary Examiner
Art Unit 1796